

Forestry Overview

Tasmania's forest industry annually turns over \$1.3 billion and is the second largest contributor to Gross Domestic Product.

The Australian Bureau of Statistics states that the industry sits first in terms of industry value-adding and third in terms of salaries and wages paid.

Directly employing more than 10,000 Tasmanians, which accounts for nearly eight per cent of the total workforce employed in the Australian forest industry.

The state's native and plantation forests produce timber for building, joinery and furniture making and woodchips for pulp and paper production.

The industry harvests mature natural forest, natural forest that has regrown after logging and plantations grown from seedlings.

Forests cover nearly half of the total area of the state.

Privately owned forests make up about 30 per cent of this forest area.

This sector of the industry is assisted by Private Forests Tasmania, a Tasmanian Government authority established to promote the development of private forestry in the state.

Forestry Tasmania, a government business enterprise, is one of the major players in the industry in Tasmania.

The company manages approximately 1.5 million hectares of state forest producing about 3 million tonnes of wood per annum.

Importantly, Tasmania is developing expertise in forest sector research.

Significant work is undertaken at the University of Tasmania in Hobart,

the CSIRO Forest and Forest Products Division and by Gunns Limited, Australia's largest fully integrated hardwood forests company.

At its pulp and paper research facility in the north-west, Gunns undertakes testing and research into a range of issues relating to the production of high quality fibre from natural and plantation forests.

Tasmanian companies have also developed innovative sawmilling methods.

Forest Enterprises Australia has pioneered milling of plantation hardwoods at its operation at Bell Bay while Neville Smith Timber Industries has established and is operating a new sawmill at the Huon Wood Centre that uses modern technology suitable for regrowth logs.



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FORESTRY



Case Study: Forestry Tasmania

Nearly half or 3.3 million hectares of Tasmania, Australia's island state, is forest.

Of this, Forestry Tasmania manages 1.5 million hectares of multiple-use state forest and forest reserves.

The company invests about \$3.5 million each year in research in a number of areas relevant to the management of these forests - including biology and conservation, forest health surveillance, hydrology, plantation development, native forest silviculture and sustainable forest landscapes.

Dr Simon Grove, Forestry Tasmania's Conservation Biologist, said timber production was one of the objectives for about half of Tasmania's State Forest.

"While harvesting is designed to ensure that recovery of the forest follows the same ecological path as recovery from natural disturbance, it is important that sufficient undisturbed habitat is left for species conservation," he said.

"The use of wildlife habitat strips - reserved corridors of mature native forest retained when adjacent areas of forest are harvested - is one system we have been researching for many years."

Habitat strips were first stipulated in the late 1980s, but at that time

little was known about their long-term effectiveness.

Two long-term scientific studies were initiated by Forestry Tasmania researchers, one in dry eucalypt forest and the other in wet eucalypt forest.

Additional shorter-term studies have been carried out in a range of forest types.

Dr Grove said research was now demonstrating the effectiveness of wildlife habitat strips at retaining the vast majority of species.

"The types of species occupying habitat strips strongly resemble those residing in continuous native forest, but differ markedly from those inhabiting the young native forest regenerating after harvest or plantation in the surrounding areas," he said.

"It will therefore be interesting to discover, over coming decades, whether the habitat strips can act as reservoirs for recolonisation of this surrounding forest as it matures."

Another important area of research for Forestry Tasmania is the development of management regimes for eucalypt plantations.

Dr Peter Volker, Principal Research Officer (Plantations) with Forestry Tasmania, said the hardwood eucalypt plantations Forestry

Tasmania had established were being used to identify ways to increase the area of forest available for rapid production of sawn timber and veneer products.

"Fundamental scientific work on photosynthesis, tree crown architecture, wood decay and allocation of biomass has led to standard operating procedures for pruning and thinning of plantations, operations required so plantation trees can be used to produce high-value timber products, as well as pulp wood for the pulp and paper industry," he said.

Extensive research is also carried out on the management of nutrients, water, pests and diseases in eucalypt plantations to maximise growth and to minimise environmental impacts.

Dr Volker said Forestry Tasmania also worked closely with processors to evaluate the suitability of the products arising from its plantations, for value-adding in Tasmania and elsewhere.

"Areas of interest include pulp yield and the strength and appearance of sawn timber and veneers," he said.

"Tree breeding focuses on improving these important economic traits as well as improving the growth and yield of the plantations."

Case Study: Forest Enterprises Australia

Delivering the future of sawmilling

Geoff Pask has worked in the timber, sawmilling and processing industry for 46 years.

So when he says the technology that has been introduced by Forest Enterprises Australia at its 10-hectare Bell Bay processing operation is the "future of the sawmilling industry", people take notice.

"We are processing nine to 14-year-old eucalyptus nitens, sourced from our own plantations, private property and those of Forestry Tasmania, to produce sawn timber products," he said.

"Just a few years ago people in the industry were saying this could not be done but we have now proved them wrong."

The result is FEA's unique EcoAsh product which is twice as strong as pine and can be used for a variety of purposes, including structural grade timber for joists, studs, plates and bearers, decking, furniture, panelling and flooring.

Mr Pask, FEA Timber's General Manager, said the company's operation at Bell Bay was unique.

"After the logs arrive and are sorted to Small End Diameter, we use a Finnish-built Hewsaw to cut the hardwood logs, which are between 110 mm to 270 mm diameter and up to five-metres-long," he said.

"Several boards are cut in a single pass which releases stresses in the timber and avoids any potential movement," he said.

"Woodchips produced during the milling process are sent to our joint-venture company Smart Fibre, located here at Bell Bay, while sawdust is used for boiler fuel and bark for garden mulch.

"The boards are then air dried for several weeks before being placed in sophisticated Italian-designed kilns that bring the timber's moisture content down to the correct level in just a matter of days."

Mr Pask said the timber processing operation also handled radiata pine.

"Some of the radiata we process is sold untreated to interstate markets for palings, railings or landscaping, while some is racked and dried and then sold as a kiln-dried rough sawn product for further machining," he said.

"We also machine it ourselves for use in lining and decking.

"Woodchips from this process are used by Carter Holt Harvey to produce fibreboard."

Mr Pask said consistent performance improvement or enhancement was important.

"For example, we have ordered a new Finnish-built compression kiln that will significantly reduce hardwood drying time from several weeks to a few hours," he said.

"And we are working on developing a knot-free timber, EcoAsh Clear, for use in furniture and mouldings that will attract a premium price."

Mr Pask joined FEA in 2004 after the company purchased the land and sawmill at Bell Bay to develop the timber processing plant in August 2002.

"The facility has developed significantly since it was purchased," he said.

"In 2006/07 we are planning to process about 85,000 tonnes of plantation grown wood, 60,000 tonnes of radiata and 25,000 tonnes of hardwood."

Mr Pask said it was personally very pleasing to show interested people, and particularly timber industry representatives, through the Bell Bay operation.

"The comments are always extremely positive and I am yet to hear any criticism," he said.

"The facility is an important component of the FEA operations as it is not only providing high quality sawn timber, it is assisting in the development of markets for sustainably grown plantation eucalypt."

Case Study: Forestry Cooperative Research Centre



The new Forestry Cooperative Research Centre, at the University of Tasmania campus, will build on the work and achievements of the two previous CRCs it has replaced.

The Forestry CRC, which will receive \$26.6 million in Federal funding over seven years and a further \$57 million cash and in-kind support from industry partners over the same period, will concentrate on research associated with the production of fibre and solid wood from hardwood plantations.

It has been estimated that the work of the CRC will deliver an increase in industry productivity worth more than \$820 million in present value terms over the next 20 years.

Rod Griffin, the Chief Executive Officer of the new Forestry CRC in Tasmania, has spent his adult life breeding trees in Australia, South America and South East Asia.

Before joining the former CRC for Sustainable Production Forestry in January 2002, Professor Griffin worked for Shell International for 10 years managing its forestry research programs and providing tree breeding advice to plantation companies the world over. He also worked for the CSIRO for 20 years in forestry genetics.

Professor Griffin said the Forestry CRC's research was divided into four research programs.

"We will continue to build on the work of the previous CRC to reduce the cost of wood production, decrease investment risks and reduce off-site effects of tree plantation management," he said.

"At the same time we will work on increasing the value of wood production through the application of new technologies.

"But we will also be moving into two new areas.

"The first, harvesting and operations will aim to provide greater market competitiveness for Australian wood products.

"The second new area, the trees in landscape program, will place a stronger focus on developing and verifying more sustainable forest practices which will lead to better acceptance of the industry by the community.

"This new area of work recognises that the community has a great many issues that interest them when it comes to forestry.

"We need to accept that and work on ways to foster greater acceptance

of the industry by the communities in which we operate."

Professor Griffin said it was important to note that the new CRC had retained all of its industry partners.

"We have also attracted new partners, including the University of Melbourne and Murdoch, and major hardwood plantation growers," he said.

"We now have 26 participants based throughout Australia.

"These industry partners manage half of Australia's industrial tree plantation estate and 60 per cent of the native production forests - six in Tasmania, three in Victoria, seven in Western Australia and two in New South Wales.

"These companies and organisations benefit directly from the CRC research programs and make direct use of the innovative research we are undertaking."

Professor Griffin said commercialising research findings that would ultimately assist industry to turn research success into financial returns was obviously very important for the CRC.

He said the Tasmanian Government's Department of Economic Development would contribute to its commercialisation activities.



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